



D5.2 – Data Management Plan



Communities for Sciences

Towards Promoting an Inclusive Approach in Science Education

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Project Acronym	C4S
Project Name	Communities for Science – Towards Promoting an Inclusive Approach in Science Education
Grant Agreement	872104
Start date of the project	01/10/2020
End date of the project	30/09/2023
Related Work Package	WP5
WP Lead Partner	FUB
Other Partner(s) involved	All
Deliverable identifier	D5.2
Deliverable lead beneficiary	FUB
Due date	M6
Date of delivery	26/03/2021
Version	V13
Author	FUB
Classification	Public

This project has received funding from the European Union’s Horizon 2020 research and innovation programme under Grant Agreement No 872104



REVISION HISTORY			
Revision	Date	Comments	Author
V1	15/02/2021	First Draft	Lluïsa Sort García (FUB)
V2	07/03/2021	Revision	Manresa Library experts (BCUM)
V3	18/03/2021	Revision	Claudia Piovano (Galileo)
V4	22/03/2021	Revision	Gabriel Lemkow (FUB)
V5	23/03/2021	Revision	Sarah Scheer (IB)
V6	23/03/2021	Revision	Leen Rosiers (EhB)
V7	23/03/2021	Revision	Laura Hohoff (WU_RCE)
V8	23/03/2021	Revision	Luisa Zecca (Unimib)
V9	24/03/2021	Revision	Kristina Orban (ULUND)
V10	24/03/2021	Revision	Nadia Koltcheva (NBU)
V11	24/03/2021	Revision	Salvador Simó (UVic)
V12	25/03/2021	Revision	Alessandro Porcheddu (Giocheria Sesto)
V13	26/03/2021	Final edition	FUB



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1.Introduction

This Data Management Plan (DMP) is developed with the main aim of having a structured guidance on how to manage the data, and has been prepared following the guidance of the tool “eiNa DMP¹” from CSCU (Consorti de Serveis Universitaris de Catalunya) based on the document “Guidelines on FAIR Data Management in Horizon 2020” (Version 3.0, 26th July 2016²). As stated by the mentioned guidelines, the goal of this DMP version is not to generate an extensive and definitive document but rather to set the basis of data management in the Communities for Science (C4S) H2020 project.

This DMP is **closely related** with the following documents:

- **C4S – D6.2 POPD** – Requirement Nº 2 - Description of the technical and organisational measures that will be implemented to safeguard the rights and freedoms of the data subjects/research participants (delivered on M3)
- **C4S – D4.2 Pilot Operation Manual** (to be delivered on M12)

Given the fact that most of the data collected will be defined and protocolised during the elaboration of the D4.2, this document will be kept therefore alive, and it will be periodically updated and completed during the whole duration of the project.

This document will cover the entire data management life cycle, even beyond the project. Given that **C4S takes part of the Open Research Data Pilot (ORDP) in Horizon 2020**, this DMP takes into account which of the data generated by the project can be open and accessible.

C4S takes into account most of the **Responsible Research and Innovation (RRI)** dimensions, and with this document the consortium also wants to make easily identifiable the compromises with Open Access dimension related with data.

2.Data Summary

Purpose of the data collection/generation and Types and formats of data

During the C4S project development, a number of activities will take place that will involve the participation of children and their families from communities at risk of vulnerability, and there will be two ranges of observational data collected. Those will be used for the following purposes.

- Data collected during the pilot development phase (WP4): It will be used to reach the project’s research objectives and to validate the activities to be transferred to other countries and realities beyond the C4S project. This data will also be presented in conferences and peer-reviewed publications. This includes associated metadata.
- Other kinds of data generated during science activities within the Hubs (WP3 and WP5), especially those related to community engagement, images of the development of activities, videos, audio recordings, etc. *This data will not be stored, neither treated at a Consortium level, nor will not influence the research aspects of the project.* The treatment of this data will be mainly affected by the aspects described in the D6.4 about Ethical Aspects and POPD.

In conclusion, in this document will be described the research data generated in WP4.

¹ “eiNa DMP – “Pla de Gestió de Dades de Recerca” ([link](#))

² “Guidelines on FAIR Data Management in Horizon 2020” ([link](#))



Formats: The format of the shared data will be the non-proprietary format CSV (Comma-Separated Values).

Mora data information on formats and typologies will be detailed in the D4.2 Pilot Operation Manual.

Re-use of existing data

No existing data is being re-used.

What is the origin of the data?

Primary data will be collected, at partner level, mainly by structured questionnaires to be completed during different phases of the pilots (online and/or in handwritten format) and the structured analysis of video and images collected during the pilots at specific moments of the pilot development. Once collected and anonymized, the images are processed, resultant data will be entered into the “REDCap³” system, to ensure homogeneity and facilitate the final analysis of the results.

Expected size of the data

The expected size is very small: around 6MB.

Data utility

The datasets will be useful for different collectives:

- Researchers involved in similar projects.
- Students and Teachers involved in inclusive science education projects.
- Other stakeholder groups identified within the proposal (policy-makers, citizens etc.)

2.FAIR data

2.1 Making data findable, including provisions for metadata

The datasets produced will be available on Zenodo repository:

<https://zenodo.org/communities/c4s/>

Every dataset will have an associated text document (readme.txt) with its associated descriptive and technical metadata. The data will be locatable by means of a DOI (Digital Object Identifier) for persistent identification and citability of the dataset.

In D4.2, we will establish the naming structure of the dataset.

2.2 Making data openly accessible

Personal data will not be available, and this data will only be shared among partners only once the anonymisation process is ensured and the rights of the participants for privacy are enforced and secured.

³ REDCap – Research Electronic Data Capture ([link](#))



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The data and metadata shared in the repositories will be the information used to elaborate the results of the pilot activities (to be detailed in D4.2), mainly the extracted data of the REDCap system.

2.3 Making data interoperable

The data will be shared in CSV non-proprietary format, and information on data and metadata vocabularies will follow the standards or methodology to facilitate interoperability.

2.4 Increase data reuse

All the datasets will have an attribution Creative Commons license (CC-BY).

All the data sets will be findable and reusable through the project specific Zenodo repository, and from OpenAire, the latest by the end of the project.

The data will be available from six month to twelve months after the results have been published.

3. Allocation of resources

There is no cost associated with the shared datasets: ZENODO is a free repository, and FUB server costs maintenance for REDCap will be assumed with overheads of the project. Copyright licensing with Creative Commons is free of charge.

All Consortium partners will be responsible for their own raw data generated/gathered (before anonymized, processed, and shared to the whole consortium within the REDCap platform). D6.4 states the mechanisms to guarantee this responsibility (also for non-pilot data gathered).

FUB, as project coordinators, will be the final responsible of the dataset generated and shared in the repository.

4. Data security

Open data in ZENODO will be secured under the strict conditions of the repository⁴.

Data entered in REDCap will be stored in a secure server on Fundació Universitària del Bages (FUB), and we will keep it for 5 years after the end of the project.

5. Ethical aspects

C4S works mainly with minors from vulnerable communities, and we will ensure the **confidentiality and privacy of the data** at all times, so we will pay special attention to following all the ethical requirements when collecting and analysing data.

⁴ <https://zenodo.org/policies>



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To ensure that the H2020 ethical rules are met, a new WP6 on Ethics requirements was created during the Grant Agreement preparation process, with a set of requirements that must be delivered to the EC during the 1st year of the C4S project. More specifically, the Ethical requirements (and deliverables) are the following:

- **D6.1** H – Requirement N^o 1 - 2.2. The informed consent procedures that will be implemented for the participation of humans must be submitted as a deliverable. **(M12)**
- **D6.2** POPD – Requirement N^o 2 - 4.6 A description of the technical and organisational measures that will be implemented to safeguard the rights and freedoms of the data subjects/research participants must be submitted as a deliverable. **(M3)**
- **D6.3** H – Requirement N^o 3 - Templates of the informed consent/assent forms and information sheets (in language and terms intelligible to the participants) must be submitted as a deliverable. **(M12)**
- **D6.4** H – Requirement N^o 4 - The procedures and criteria that will be used to identify/recruit research participants, including children must be submitted as a deliverable. **(M1)**
- **D6.5** H – Requirement N^o 5 - 2.9. Copies of opinions/approvals by ethics committees and/or competent authorities for the research with humans must be submitted as a deliverable. **(M12)**
- **D6.6** POPD – Requirement N^o 6 - 4.4 The beneficiary must explain how all of the data they intend to process is relevant and limited to the purposes of the research project (in accordance with the 'data minimisation' principle). **(M12)**

C4S will also count with some Ethical Experts in the Advisory Board, that help the consortium to deal with the requirements.

6. Other issues

None.